



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The isolation of the two substances — the reducing and the oxidizing — was now attempted. The former is not changed by boiling or by the action of chloroform, and is soluble in alcohol; the latter is destroyed by heat, is unchanged by chloroform, is insoluble in alcohol, and can be extracted from the triturated cells by water. A large number of root-tips of *Vicia faba* were first rubbed up with water until no fragments remained. The aqueous extract was filtered, and to the filtrate alcohol was added. A precipitate was formed which had all the properties of the oxidizing substance. It is highly probable that it belongs to the category of oxidation ferments. To get the reducing substance, the preceding solution was filtered to eliminate the alcoholic precipitate. The filtrate had all the properties of the reducing substance. A further study indicated that it belonged to the aromatic organic substances, many of which have an intense reducing action, and are hence used in photography.

Thus, geotropic stimulation of the root-tip produces chemical changes leading to the increase of a reducing substance of aromatic nature, and to a diminution in the amount of an oxidizing ferment.

Dissimilar Reciprocal Crosses. — It has been observed in many cases that the two hybrids $A\varphi \times B\delta$ and $B\varphi \times A\delta$ are dissimilar. In the current Heft of the *Jenaische Zeitschrift* is an interesting note by the late Fitz Müller-Desterro, serving to explain this phenomenon in a single case, the hybrid of *Ruellia formosa* and *R. silvaccola*. The parent flowers differ in that those of *R. formosa* are a dark, luminous red, while those of *R. silvaccola* are a clear, faint red. The hybrid $R. silvaccola\varphi \times formosa\delta$ is of a beautiful red, more like the red of *R. formosa* than of *R. silvaccola*; and $R. formosa\varphi \times silvaccola\delta$ is of a cloudy mixed color, with more or less extensive smutty blotches. The difference of color is due to the fact that the egg cell only, and not the male cell, transmits the chromatophores upon which the color depends; hence, the hybrid $R. silvaccola\varphi \times formosa\delta$ received chromatophores from *silvaccola* only, while $formosa\varphi \times silvaccola\delta$ received them from *formosa* only. (This result does not, however, fully explain the observed facts of color in the hybrid.) The important conclusion is now drawn that in this case the qualities of the hybrid depend, not alone on the germ plasm in a strict sense, but also on certain living included particles.

Scientific Agriculture. — One of the most handy books of reference which has appeared of late is Henry's *Feeds and Feeding*.¹

¹ Henry, W. A. *Feeds and Feeding*. A handbook for the student and stockman. Madison, Wis., 1898. Published by the author. 8vo, vi + 657 pp.